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# ⚠ Foreword

The installation, use and maintenance manual (hereinafter Manual) provides the user with information necessary for correct and safe use of the machine (hereinafter "machine", "refrigerator" or "appliance").
The following must not be considered a long and exacting list of warnings, but rather a set of instructions suitable for improving machine performance in every respect and, above all, preventing injury to persons and animals and damage to property due to improper operating procedures.
All persons involved in machine transport, installation, commissioning, use and maintenance, repair and disassembly must consult and carefully read this manual before carrying out the various operations, in order to avoid wrong and improper actions that could compromise the machine's integrity or endanger people. Make sure to periodically inform the user regarding the safety regulations. It is also important to instruct and update personnel authorised to operate on the machine, regarding its use and maintenance.
The manual must be available to operators and carefully kept in the place where the machine is used, so that it is always at hand for consultation in case of doubts or whenever required.
If, after reading this manual, there are still doubts regarding machine use, do not hesitate to contact the Manufacturer or the authorised Service Centre to receive prompt and precise assistance for better operation and maximum efficiency of the machine.
During all stages of machine use, always respect the current regulations on safety, work hygiene and environmental protection. It is the user's responsibility to make sure the machine is started and operated only in optimum conditions of safety for people, animals and property.
**The manufacturer declines any liability for operations carried out on the appliance without respecting the instructions given in this manual.**
**No part of this manual may be reproduced.**

# A.1 General information

**Thank you for choosing a quality product. We are sure our Prostore refrigerator will meet all your needs for proper keeping of food.**

### A.1.1 General safety instructions

To ensure safe use of the machine and a proper understanding of the manual it is necessary to be familiar with the terms and typographical conventions used in the documentation. The following symbols are used in the manual to indicate and identify the various types of hazards:

**ATTENTION**
**Danger for the health and safety of operators.**

**WARNING**
**Danger of electrocution - dangerous voltage.**

Words further explaining the type of hazard are placed next to the symbols in the text. Warnings serve to ensure the safety of personnel.

### A.1.2 Additional indications

In this manual the risks arising from incorrect use will be marked with:

**ATTENTION**
**Risk of damage to the machine or the product.**

The parts of the text preceded by the following symbol:

**NOTE**
**Clarifications and explanations**

provide recommendations to keep in mind during the entire life-cycle of the product.

The drawings and diagrams given in the manual are not in scale. They supplement the written information with an outline, but are not intended to be a detailed representation of the machine supplied.
The numerical values given on the machine installation diagrams refer to measurements in mm.

### A.1.3 Introduction

Given below is some information regarding the machine's intended use, its testing, and a description of the symbols used (that identify the type of warning), the definitions of terms used in the manual and useful information for the appliance user.

### A.1.4 New appliance concept

The cupboard line has been created according to a new system that optimises performance and reduces energy consumption, also taking into account space requirements and environmental impact. Given below are the main features of this new system:

- the door frame allows the side walls to be completely filled with foam insulation, whereas the inside part has been created in such a way as to increase the insulation.
- the ball-shaped door seal with three chambers has a double insulation area that reduces condensation and consumption.
- all the internal components (e.g. rear supports) are removable.
- the appliance has a conveyor that distributes the internal air flow uniformly, thereby allowing a uniform temperature to be maintained even when there is an excessive product load.
- the position of the compressor facilitates charging with gas.
- there can be various types of refrigerant gas:
  R134a
  R404A
  R290.

### A.1.5 Easy cleaning

The cupboard line is easy to clean thanks to the rounded corners and the possibility of removing all the internal components.

### A.1.6 Recyclability and environmental impact

The appliances have been designed also taking environmental impact into account, and therefore the following have been used:

- cyclopentane for the foaming, which offers better insulation and is 100% "environmentally friendly" (good environmental impact);
- the refrigerating units use an HFC (R134a/R404a) or HC (R290) refrigerant fluid allowed by the current regulations.
- the refrigerating unit can be removed in one piece;
- the parts of the appliance are made from recyclable material.

### A.1.7 Intended use and restrictions

Our appliances are designed and optimised in order to obtain high performance and efficiency. This appliance is designed for the refrigeration and preservation of foods.
Any other use is deemed improper. The appliance must not be used by people (including children) with limited physical, sensory or mental abilities or without experience and knowledge of it, unless instructed in its use by those responsible for their safety.

**ATTENTION**
**Do not store explosive substances, such as pressurised containers with flammable propellant (🔥), in this appliance.**

**ATTENTION**
**Do not use the appliance to store bottles: the inside racks are not suitable for this type of use.**

**ATTENTION**
**The machine is not suitable for installation outdoors and/or in places exposed to atmospheric agents (rain, direct sunlight, etc.).**

### A.1.8 Testing and inspection

Our appliances are designed and optimised, with laboratory testing, in order to obtain high performance and efficiency. The product is shipped ready for use.
Passing of the tests (visual inspection - electrical test - functional test) is guaranteed and certified by the specific enclosures.

### A.1.9 Definitions

Listed below are the definitions of the main terms used in the manual. It is advisable to read them carefully before use.

***Operator***
machine installation, adjustment, use, maintenance, cleaning, repair and transport personnel.

***Manufacturer***
Electrolux Professional SpA or any other service centre authorised by Electrolux Professional SpA.

***Operator for normal machine use***
an operator who has been informed and trained regarding the tasks and hazards involved in normal machine use.

***After-sales service or specialised technician***
an operator instructed/trained by the Manufacturer and who, based on his professional and specific training, experience and knowledge of the accident-prevention regulations, is able to appraise the operations to be carried out on the machine and recognise and prevent any risks. His professionalism covers the mechanical, electrotechnical and electronics fields.

***Danger***
source of possible injury or harm to health.

***Hazardous situation***
any situation where an operator is exposed to one or more hazards.

***Risk***
a combination of probabilities and risks of injury or harm to health in a hazardous situation.

***Protection devices***
safety measures consisting of the use of specific technical means (guards and safety devices) for protecting operators against risks.

***Guard***
an element of a machine used in a specific way to provide protection by means of a physical barrier.

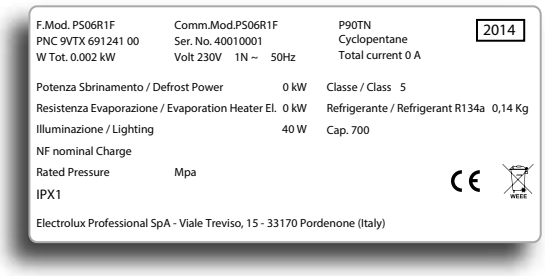
***Safety device***
a device (other than a guard) that eliminates or reduces the risk; it can be used alone or in combination with a guard.

***Customer***
the person who purchased the machine and/or who manages and uses it (e.g. company, entrepreneur, firm).

***Electrocution***
an accidental discharge of electric current on a human body.

### A.1.10 Machine and manufacturer's identification data

A reproduction of the marking or data plate on the machine is given below:




The data plate gives the product identification and technical data.
The meaning of the various information given on it is listed below:

| | |
|---|---|
| **F.Mod.** | factory description of product |
| **Comm.Model** | commercial description |
| **P90TN(*)** | certification group (*Type*) |
| **PNC** | production number code |
| **Ser.No.** | serial number |
| **230V 1N** | power supply voltage |
| **50 Hz** | power supply frequency |
| **0.002 kW** | max. power input |
| **Cyclopentane** | expanding gas used in insulation |
| **Total Current** | current absorbed |
| **Defrost Power** | defrost power |
| **Evaporation Heater El.** | heating element power |
| **Lighting** | internal light |
| **Class** | climatic |
| **Refrigerant** | type of refrigerant gas |
| **Cap.** | nominal capacity |
| **IPX1** | dust and water protection rating |
| **CE** | CE marking |
| **Electrolux Professional SpA<br>Viale Treviso 15<br>33170 Pordenone Italy** | manufacturer |

*** Description of certification group (*Type*)**

| | |
|---|---|
| **P** | "Prostore" range refrigerator |
| **90** | 900 mm |
| **TN** | Temperature range (TN=refrigerated; BT=freezer; TN/TN=refrigerated 2 temperatures; TN/BT=refrigerated/freezer 2 temperatures) |

When installing the appliance, make sure the electrical connection is carried out in compliance with that specified on the data plate.

**ATTENTION**
**Do not remove, tamper with or make the machine marking illegible.**

**NOTE**
**Refer to the data given on the machine's data plate for relations with the Manufacturer (e.g. when ordering spare parts, etc.).**

**NOTE**
**When scrapping the machine, the marking must be destroyed.**

### A.1.11 Appliance identification

This manual applies to various refrigerator/freezer models. For further details regarding your model, refer to par. **A.2.3 Dimensions, performance and consumption.**

### A.1.12 Copyright

This manual is intended solely for consultation by the operator and can only be given to third parties with the permission of Electrolux Professional SpA.

### A.1.13 Responsibility

The Manufacturer declines any liability for damage and malfunctioning caused by:

- non-compliance with the instructions contained in this manual;
- repairs not carried out in a workmanlike fashion, and replacements with parts different from those specified in the spare parts catalogue (the fitting and use of non-original spare parts and accessories can negatively affect machine operation and invalidates the warranty);
- operations by non-specialised technicians;
- unauthorised modifications or operations;
- inadequate maintenance;
- improper machine use;
- unforeseeable extraordinary events;
- use of the machine by uninformed and untrained personnel;
- non-application of the current provisions in the country of use, concerning safety, hygiene and health in the workplace.

The Manufacturer declines any liability for damage caused by arbitrary modifications and conversions carried out by the user or the Customer.
The employer, workplace manager or service technician are responsible for identifying and choosing adequate and suitable personal protection equipment to be worn by operators, in compliance with regulations in force in the country of use.
Electrolux Professional SpA declines any liability for inaccuracies contained in the manual, if due to printing or translation errors.
Any supplements to the installation, use and maintenance manual the Customer receives from the Manufacturer will form an integral part of the manual and therefore must be kept together with it.

### A.1.14 Personal protection equipment

Given below is a summary table of the Personal Protection Equipment (PPE) to be used during the various stages of the machine's service life.

| **Phase** | Protection garments | Safety footwear | Gloves | Glasses | Ear protectors | Mask | Safety helmet |
|---|---|---|---|---|---|---|---|
| **Transport** | | ● | ○ | | | | ○ |
| **Handling** | | ● | ○ | | | | |
| **Unpacking** | | ● | ○ | | | | |
| **Installation** | | ● | ○ | | | | |
| **Normal use** | ● | ● | ●* | | | | |
| **Adjustments** | ○ | ● | | | | | |
| **Routine cleaning** | ○ | ● | ●* | ○ | | | |
| **Extraordinary cleaning** | ○ | ● | ● | ○ | | | |
| **Maintenance** | ○ | ● | ○ | | | | |
| **Dismantling** | ○ | ● | ○ | | | | |
| **Scrapping** | ○ | ● | ○ | | | | |

Key: ● PPE required; ○ PPE available or to be used if necessary; PPE not required.

(*) During **Normal use**, gloves protect hands from the cold tray when being removed from the appliance.
**Note**: The gloves to be worn during cleaning are the type suitable for contact with the cooling fins (metal plates).
Failure to use the personal protection equipment by operators, specialised technicians or users can involve exposure to chemical risk and possible damage to health.

#### A.1.15 Keeping the manual

The manual must be carefully kept for the entire life of the machine, until scrapping.
The manual must stay with the machine in case of transfer, sale, hire, granting of use or leasing.

#### A.1.16 Recipients of the manual

This manual is intended for:

- the carrier and handling personnel;
- installation and commissioning personnel;
- the employer of machine users and the workplace manager;
- operators for normal machine use;
- specialised technicians - after-sales service (see service manual).

## A.2 Technical data

#### A.2.1 Climatic class

The climatic class given on the data plate refers to the following values:

**for fully insulated door models, "ice-cream preservers" and "Marine" models**
CLIMATIC CLASS: 5
43°C (EN 60335-2-89)
40°C room with 40% relative humidity
(EN ISO 23953).

**for glass door models**
CLIMATIC CLASS: 4
32°C (EN 60335-2-89)
30°C room with 55% relative humidity
(EN ISO 23953).

#### A.2.2 Materials and fluids used

The areas in contact with the product are in steel or coated with non-toxic plastic material. An HFC or HC refrigerant fluid for models with refrigerant R290, complying with the current regulations, is used in the refrigerating units. The type of gas used is given on the data plate.

**ATTENTION**
**R290 gas is potentially flammable and explosive! Take every possible precaution to prevent any risk linked to the nature of this gas during any routine and/or extraordinary operation carried out on the appliance. Only specialised personnel are authorised to operate on the machine.**

### A.2.3 Dimensions, performance and consumption

***600 mm models***

**External dimensions:**

| | |
|---|---|
| width mm | 600 |
| depth mm | 700 |
| height mm | 2040 |

**Compartment dimensions:**

| | |
|---|---|
| width mm | 472 |
| depth mm | 582 |
| height mm | 1474 |

| | |
|---|---|
| Rack dimensions mm | 520x442 |
| Power supply voltage V | 230/50 (Standard models) |
| Power supply voltage V | 220/60 ("Marine" refrigerated models) |
| Power supply voltage V | 220/50-60 ("Marine" freezer models) |
| Gross capacity L | 470 |
| Equivalent sound pressure level Leq (*) dB(A) | <70 |

(*) The value could increase depending on the workplace where measured.

***900 mm models***

**External dimensions:**

| | |
|---|---|
| width mm | 900 |
| depth mm | 700 |
| height mm | 2040 |

**Compartment dimensions:**

| | |
|---|---|
| width mm | 772 |
| depth mm | 582 |
| height mm | 1471 |
| model R290 height mm | 1436 |

| | |
|---|---|
| Rack dimensions mm | 700x530 |
| Power supply voltage V | 230/50 (Standard models) |
| Power supply voltage V | 220/60 ("Marine" refrigerated models) |
| Power supply voltage V | 220/50-60 ("Marine" freezer models) |
| Gross capacity L | 720 |
| Equivalent sound pressure level Leq (*) dB(A) | <70 |

(*) The value could increase depending on the workplace where measured.

| | | |
|---|---|---|
| ***Refrigerated models with fully insulated door and glass door*** | | |
| Temp. range in compartment °C | | 0/+10 |
| ***Freezer models with fully insulated door*** | | |
| Temp. range in compartment °C | | -15/-22 |
| ***Refrigerated models with separate compartments*** | | |
| Temp. range in compartment °C | 0/+10 | 0/+10 |
| ***Refrigerated/freezer models with separate compartments*** | | |
| Temp. range in compartment °C | 0/+10 | -15/-22 |
| ***"Ice-cream preserver" models*** | | |
| Temp. range in compartment °C | | -12/-28 |
| ***"Marine" refrigerated models*** | | |
| Temp. range in compartment °C | | 0/+10 |
| ***"Marine" freezer models*** | | |
| Temp. range in compartment °C | | -15/-22 |

### A.2.4 Mechanical safety characteristics, hazards

The appliance does not have sharp edges or protruding parts. The guards for the moving and live parts are fixed to the cabinet with screws, to prevent accidental access.

## B.1 Transport, handling and storage

### B.1.1 Introduction

Transport (i.e. transfer of the machine from one place to another) and handling (i.e. transfer inside workplaces) must occur with the use of special and adequate means.

**ATTENTION**
**Due to their size, the machines cannot be stacked on top of each other during transport, handling and storage; this eliminates any risks of loads tipping over due to stacking.**

**NOTE**
Qualified personnel must:
- have specific technical training and experience in the use of lifting systems;
- have knowledge of the safety regulations and applicable laws in the relevant sector;
- have knowledge of the general safety rules;
- ensure the use of personal protection equipment suitable for the type of operation carried out;
- be able to recognise and avoid any possible hazard.

### B.1.2 Transport: instructions for the carrier

**ATTENTION**
**Do not stand under suspended loads during loading/unloading operations. Unauthorised personnel must not enter the work area.**
**The weight of the appliance alone is not sufficient to keep it steady.**

**NOTE**
**The transported load can shift:**
- **when braking;**
- **when accelerating;**
- **in corners;**
- **on rough roads.**

### B.1.3 Handling

Arrange a suitable area with flat floor for machine unloading and storage operations.

**Attention!**
**The appliances must be handled in the upright position. If the appliance is handled in a horizontal position, make sure to wait a few hours before making it operational.**

### B.1.4 Procedures for handling operations

For correct and safe lifting operations:
- use the type of equipment most suitable for characteristics and capacity (e.g. electric pallet truck or lift truck);
- cover sharp edges;

Before lifting:
- send all operators to a safe position and prevent persons from entering the handling area;
- make sure the load is stable;
- make sure no material can fall during lifting. Manoeuvre vertically in order to avoid impacts;
- handle the machine, keeping it at minimum height from the ground.

**ATTENTION**
**For machine lifting and anchoring, do not use movable or weak parts such as: casings, electrical raceways, pneumatic parts, etc.**

### B.1.5 Shifting

The operator must:
- have a general view of the path to be followed;
- stop the manoeuvre in case of hazardous situations.

**ATTENTION**
**Do not push or pull the appliance to move it, as it may tip over.**

### B.1.6 Placing the load

Before placing the load, make sure the way is free and that the floor is flat and can take the load. Remove the appliance from the wooden pallet, move it to one side, then slide it onto the floor.

### B.1.7 Storage

The machine and/or its parts must be stored and protected from damp, in a non-aggressive place, free of vibrations and with room temperatures between -10°C and 50°C. The place where the machine is stored must have a flat support surface to avoid deforming the machine or damage to the support feet.

**ATTENTION**
**Appliance positioning, installation and disassembly must be carried out by a specialised technician.**

**ATTENTION**
**Do not make modifications to the parts supplied with the appliance. Any missing or faulty parts must be replaced with original parts.**

## B.2 Installation and assembly

To ensure correct operation of the appliance and maintain safe conditions during use, carefully follow the instructions given below in this section.

**ATTENTION**
**The above operations must be carried out by the specialised technician in conformity with the current safety regulations, regarding the equipment used and the operating procedures.**

**Before moving the appliance make sure the capacity of the lifting equipment used is suitable for its weight.**

**Keep the ventilation openings in the appliance casing or in the installation structure free of any obstructions.**

### B.2.1 The customer's responsibilities

The tasks and works required of the Customer are:

- arrange an earthed power socket of suitable capacity for the input specified on the data plate;
- for information regarding the electrical connection, refer to par. B.2.8 "Electrical connection";
- check the flatness of the surface on which the machine is placed.

### B.2.2 Machine space limits

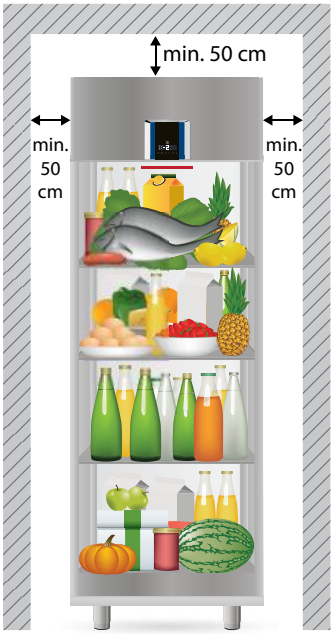
A suitable space must be left around the machine (for operations, maintenance, etc.). This space must be increased in case of use and/or transfer of other equipment and/or means or if exit routes are necessary inside the workplace. Refer to par. "B.2.3 Positioning" for information regarding distances from any other machines present in the room (in fact, close proximity can create problems of condensate forming on the walls of the appliance), also taking into consideration the space needed for door opening.

### B.2.3 Positioning

Install the appliance, taking all the safety precautions required for this type of operation, also respecting the relevant fire-prevention instructions.
Install the appliance in a ventilated place, away from heat sources such as radiators or air conditioning systems, to allow correct cooling of the refrigerating unit components.

When positioning to take into account the following distances:

- at least 50 cm from the top;
- 50 cm from the sides and back.

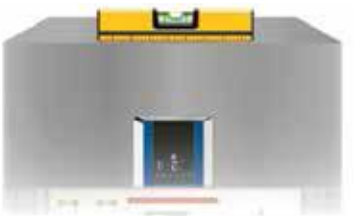



**ATTENTION**
**The plug must be accessible after positioning the appliance in the place of installation.**

Never cover the condenser, even temporarily, as this can compromise proper operation of the condenser and therefore the appliance.
If the machine is installed in a place where there are corrosive substances (chlorine, etc.), it is advisable to go over all the stainless steel surfaces with a rag soaked in paraffin oil to create a protective film.
For information regarding the room temperatures in which the machine must operate, refer to par. A.2.1 "Climatic class".
The machine must be taken to the place of installation and the packing base removed only when being installed.
Arranging the machine:

- position the machine in the required place;
- adjust the height and levelling with the adjustment feet, also checking correct door closing

**ATTENTION**
**The appliance must be levelled, otherwise its operation could be affected.**



**ATTENTION**
**If the machine is to be installed in places with low ceilings (2100 mm), the feet should be replaced with lower ones, available to order (kit code 880326-no.4 feet H67-80).**

**ATTENTION**
**Wait at least 2 hours before starting the appliance, to allow the oil to flow back into the compressor.**

**There must be free air circulation above the appliance, at the refrigerating unit. There must be no obstructions caused by trays, cardboard boxes, jars or other materials (see par. C.1.2.2).**

- wear protective gloves and unpack the machine, carrying out the following operations:
  - cut the straps and remove the protective film, taking care not to scratch the surface if scissors or blades are used;
  - remove the cardboard top, the polystyrene corners and the vertical protection pieces.

For appliances with stainless steel cabinet, remove the protective film very slowly without tearing it, to avoid leaving glue stuck to the surface.
Should this happen, remove the traces of glue with a non-corrosive solvent, rinsing it off and drying thoroughly; it is advisable to go over all the stainless steel surfaces with a rag soaked in paraffin oil in order to create a protective film.

### B.2.4 Disposal of packing

The packing must be disposed of in compliance with the current regulations in the country where the appliance is used. All the packing materials are environmentally friendly. They can be safely kept, recycled or burned in an appropriate waste incineration plant. Recyclable plastic parts are marked as follows:

| | | |
|---|---|---|
| PE | **polyethylene:** | outer wrapping, instructions bag |
| PP | **polypropylene:** | straps |
| PS | **polystyrene foam:** | corner protectors |

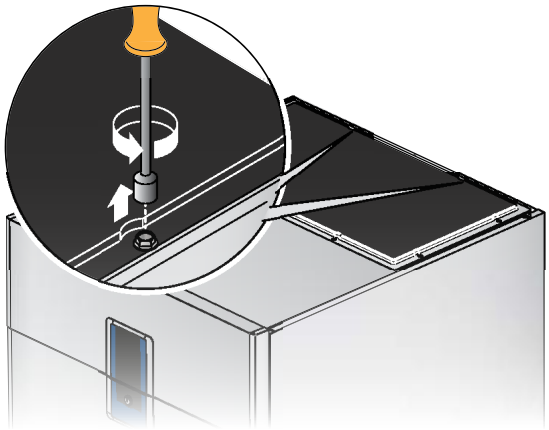
The parts in wood and cardboard can be disposed of, respecting the current regulations in the country where the machine is used.

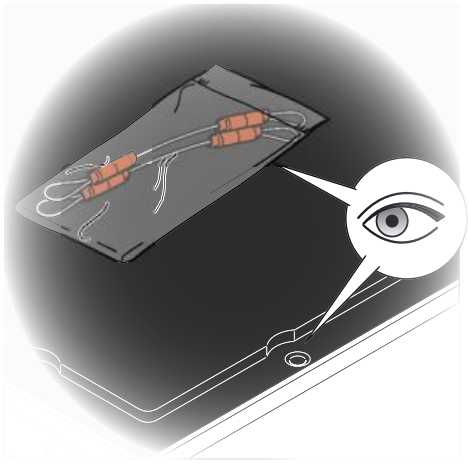
### B.2.5 Fitting anti-tipping cables on the appliance

When installing the appliance, make sure to fix the anti-tipping cables to it. To fit, proceed as follows:

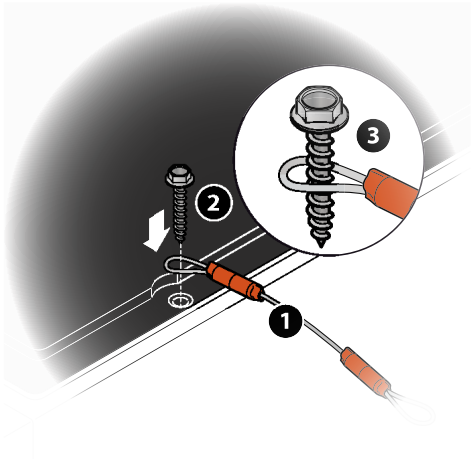
**600 mm models**

- undo the two hex screws positioned on the roof of the machine, as shown in the figure, and remove the cables from their packing:

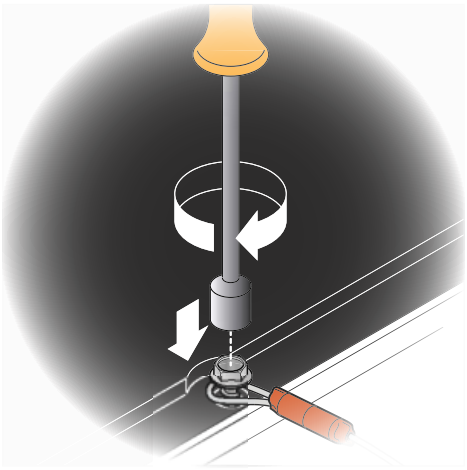




- join a slot of the cable to the hex screw, as shown in the figure:



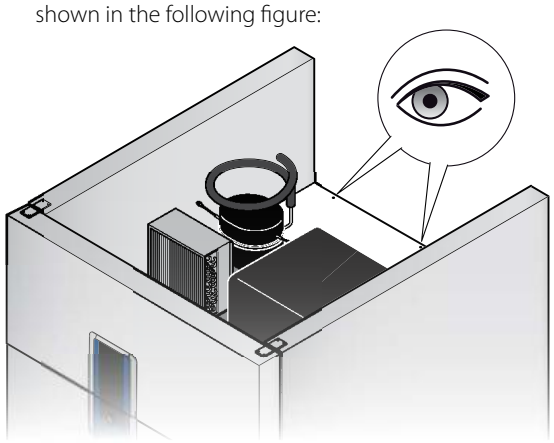

- retighten the screw complete with the cable on the roof of the appliance.



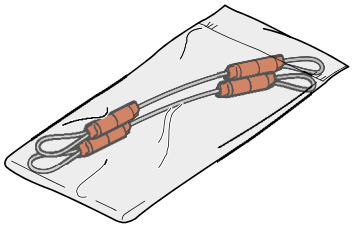
- the cable, must then be fixed to the wall using a plug, to permanently secure the appliance.
- Repeat the same operation also with the other cable.

**900 mm models**

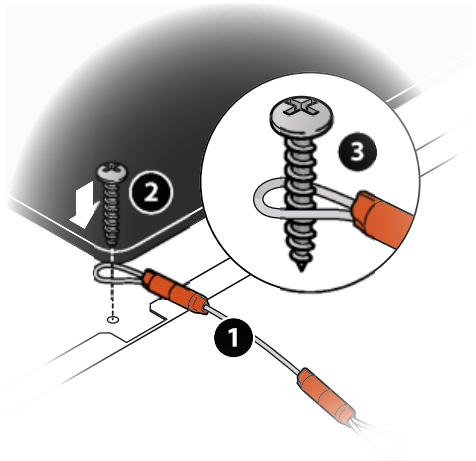
- there are 2 holes on the roof of the machine, at the areas shown in the following figure:



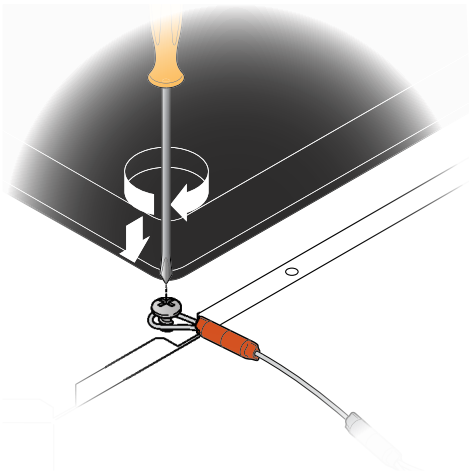
- remove the cables from their packing:



- join a slot of the cable to one of the two screws supplied with the machine, as shown below:




- retighten the screw complete with the cable on the roof of the appliance:



- the cable, must then be fixed to the wall using a plug, to permanently secure the appliance.

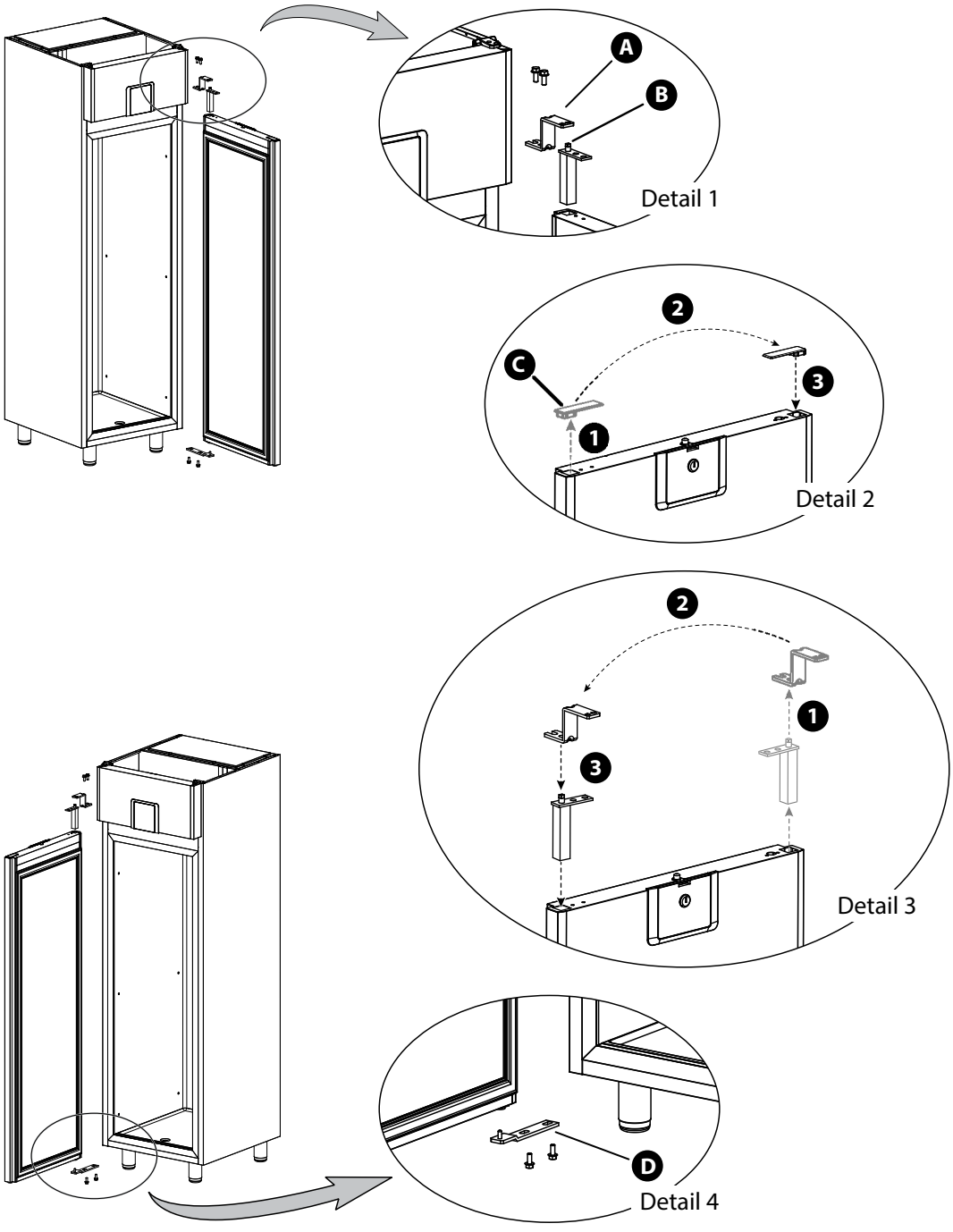
### B.2.6 Reversing opening of fully insulated doors

**ATTENTION**
**Disconnect the appliance from the power supply before carrying out the door reversing procedure.**

The refrigerated cupboards are normally supplied with right opening.

When changing to left opening, proceed as follows:

- open the control panel, loosening the 2 screws located between the panel and door;
- remove the cap located on the left side and refit it on the right side of the control panel;
- undo the 2 screws of the upper bracket "**A**", the hinge fastening screw "**B**" and the 2 fixing screws (*Detail 1*);
- remove the cap "**C**" from the left side and place it on the right side (*Detail 2*);
- remove the door, pull out the hinge from its seat, move it from the right to the left and fit it in the hole as shown in the figure (*Detail 3*);
- position the upper bracket "**A**" between the door and the roof of the appliance, tightening the fixing screws (*Detail 3*);
- remove the lower bracket "**D**" from its seat and refit it in the special seat on the opposite side (*Detail 4*);
- position the door on the lower bracket "**D**";
- before tightening the screws, align the door with the cabinet panel, adjusting the lower and upper brackets and making sure the seal is perfectly fitted on all sides;
- then tighten the bracket fixing screws;
- close the control panel again, securing the 2 screws (previously loosened) between the panel and door.

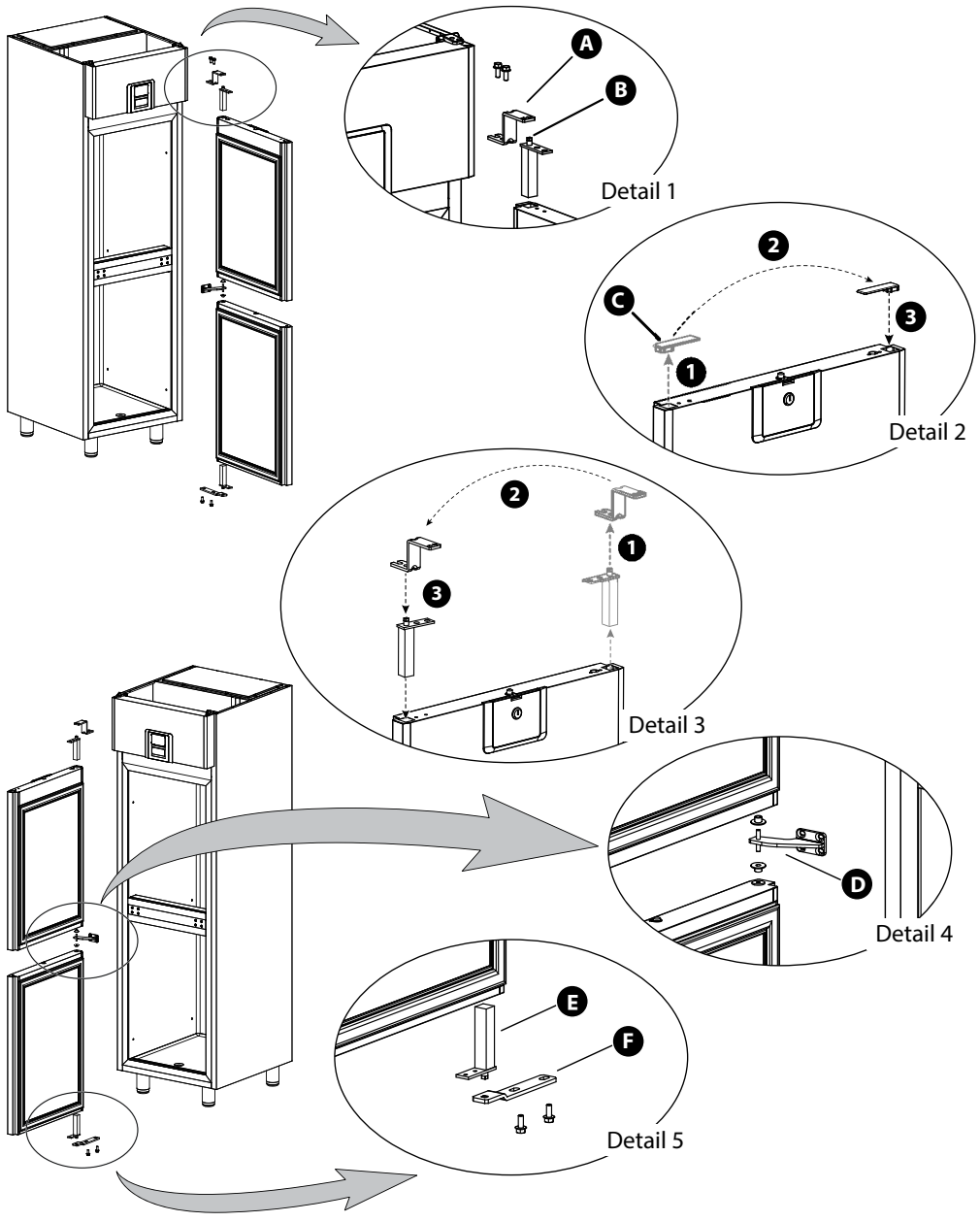


**B.2.7 Reversing opening of half doors**

## ATTENTION
## Disconnect the appliance from the power supply before carrying out the door reversing procedure.

The refrigerated cupboards are normally supplied with right opening.
When changing to left opening, proceed as follows:
open the control panel, loosening the 2 screws located between the panel and door;

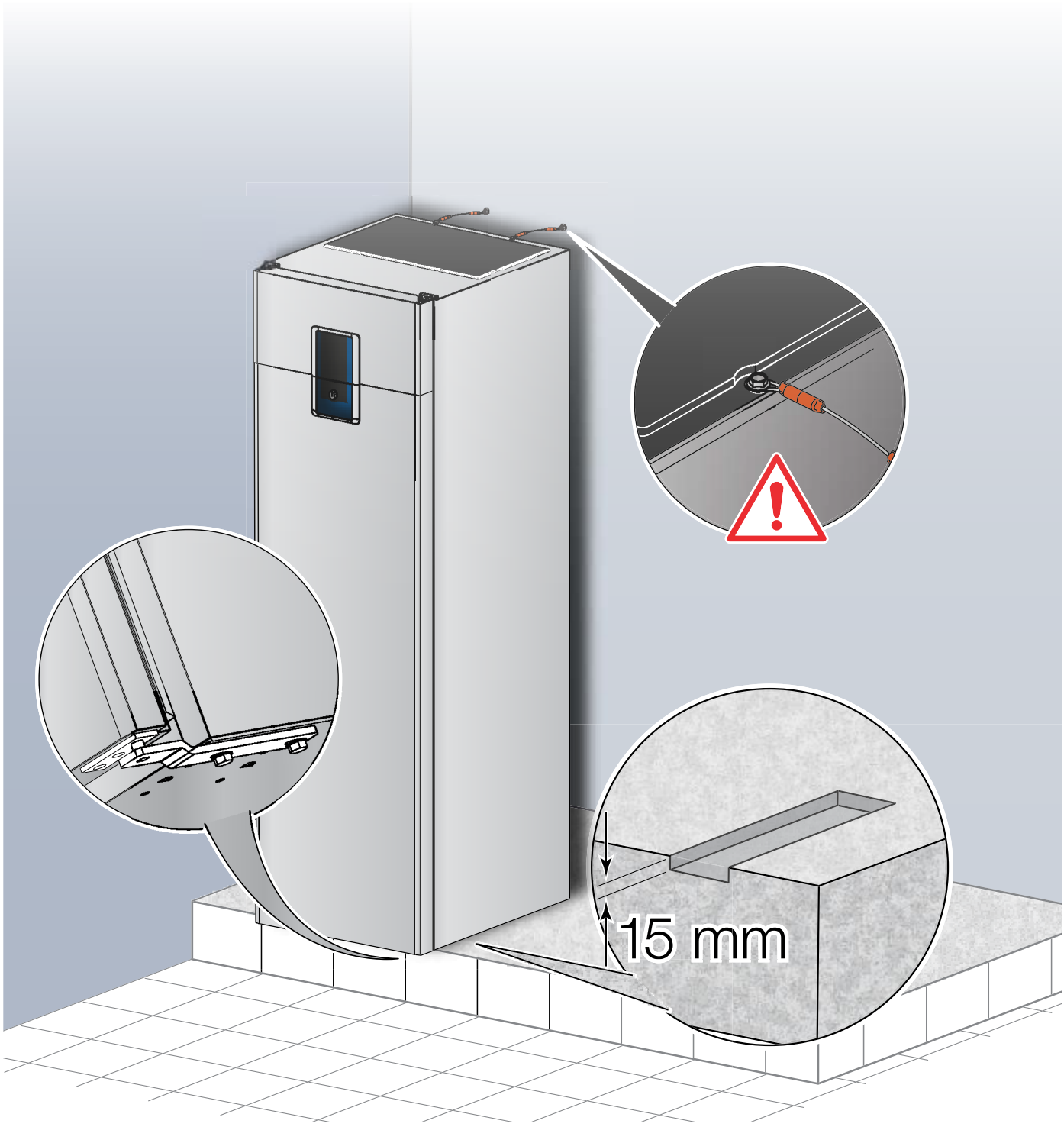
- remove the cap located on the left side and refit it on the right side of the control panel;
- undo the 2 screws of the upper bracket "**A**", the hinge fastening screw "**B**" and the 2 fixing screws (*Detail 1*);
- remove the cap "**C**" from the left side and place it on the right side (*Detail 2*);
- remove the door, pull out the hinge from its seat, move it from the right to the left and fit it in the hole as shown in the figure (*Detail 3*);
- remove the middle bracket "**D**" and fix it on the opposite side of the cabinet (*Detail 4*)
- remove the bottom hinge "**E**" and the lower bracket "**F**" from their seats and refit them in the special seats on the opposite side (*Detail 5*);
- position the bottom door on the bottom hinge "**E**";
- fix the middle bracket "**D**";
- position the top door on the middle bracket "**D**";
- position the upper bracket "**A**" between the door and the roof of the appliance, tightening the fixing screws;
- before tightening the screws, align the door with the cabinet panel, adjusting the lower and upper brackets and making sure the seal is perfectly fitted on all sides;
- then tighten the bracket fixing screws.
- close the control panel again, securing the 2 screws (previously loosened) between the panel and door.



**Note:** after carrying out the above operations, the holes in the appliance must be closed with the special plastic plugs.

**Note**: in case of installation on a concrete plinth, make 2 slots near the door bottom bracket, as deep as the thickness of the bracket and the head of the screws (at least 15mm), as shown in the following image:





### B.2.8 Electrical connection

**ATTENTION**
**If the power cable is damaged it must be replaced by the After-Sales Service or in any case by qualified personnel, in order prevent any risk.**

Connection to the power supply must be carried out in compliance with the regulations and provisions in force in the country of use.

**ATTENTION**
**Work on the electrical systems must only be carried out by a qualified electrician.**

The standard models use a single-phase 230V/50Hz power supply, the "Marine" refrigerated models single-phase 220V/60Hz and "Marine" freezer models single-phase 220V/50-60Hz.
To connect, just insert the power cable plug in the corresponding mains socket, **first making sure**:

- the socket has an efficient earth connection and the mains voltage and frequency match that given on the data plate. In case of any doubts regarding the efficiency of the earth connection have the system checked by qualified personnel;
- the system power supply is arranged and able to take the actual current absorption and that it complies with the regulations in force in the country of use;
- a differential thermal-magnetic switch suitable for the absorption specified on the data plate, with contact gap enabling complete disconnection in category III overvoltage conditions and complying with the regulations in force, is installed between the power cable and the electric line. For the correct size of the switch, refer to the absorbed current specified on the appliance data plate.

After making the connection, with the appliance working check that the power supply does not fluctuate by ±10% the rated voltage.

## B.3 Remote Unit installation

**ATTENTION**
**For the choice of remote condensing unit refer to the unit recommended by the Manufacturer, given on the equipment technical data sheet.**

**In case of extraordinary size of the remote condensing unit refer to the technical data sheet for the refrigerating capacity or consult the Manufacturer's website or Local Service Centre/Agency authorised by the Manufacturer.**

**Wear suitable protection equipment (protective gloves) when carrying out installation operations.**

**ATTENTION**
**Installation of the appliance and the refrigerant fluid condensing unit must only be carried out by the manufacturer's service personnel or by a qualified person.**

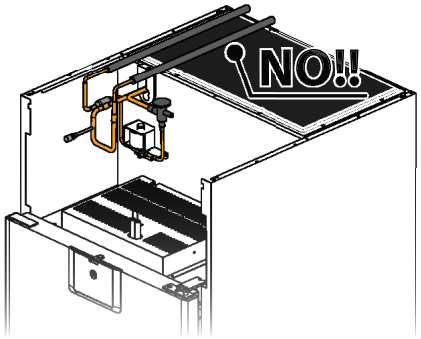
To ensure correct operation of the appliance and maintain safe conditions during use, carefully follow the instructions given below in this section.

### B.3.1 Positioning

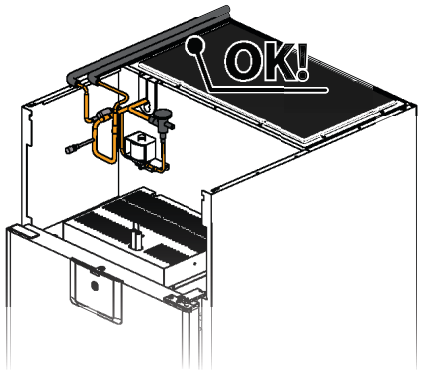
Place the condensing unit in a well-ventilated room away from heat sources.
If the remote unit is installed outdoors, it must be protected against the atmospheric agents with adequate covering, in any case ensuring correct ventilation of the condensing unit.
Connect the copper pipes, making sure to choose the shortest path and with minimum use of curves and vertical sections.
To obtain optimum appliance performance:

- in horizontal sections, the inlet line must slope down towards the condensing unit at an angle of not less than 2%;
- traps must be installed before all upward sections of the inlet line;
- insulate the inlet line with suitable lagging;
- install a suitably sized dehydration filter, a liquid flow indicator and a solenoid valve on the delivery line, in the order indicated.

**ATTENTION**
**Pay particular attention to positioning of the pipes for the remote connection of the equipment; avoid making them pass directly above the roof of the evaporator, as shown in the figure:**




**The upper left side has holes for the passage and fixing of the pipes for rear remote connection (figure below):**



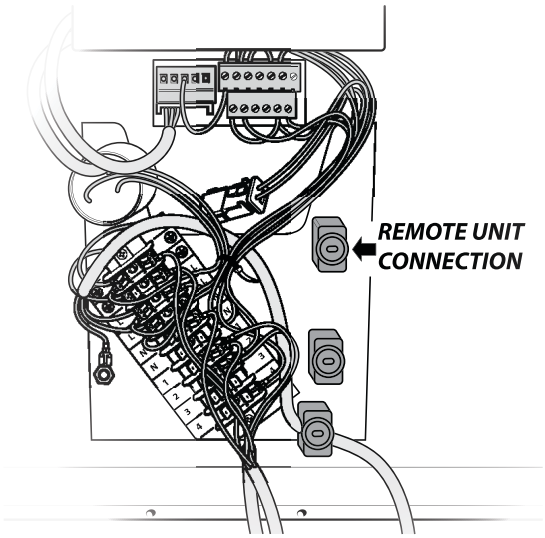

### B.3.2 Customer's responsibility

The refrigerant charge must be R134a type for refrigerated models and R404A for freezer models (depending on the type of valve fitted).
In any case refer to the data given on the rating plate.

### B.3.3 Electrical connection

The condensing unit power is supplied by the equipment it is connected to. For the electrical connection, carefully follow the instructions in par. B.2.8.

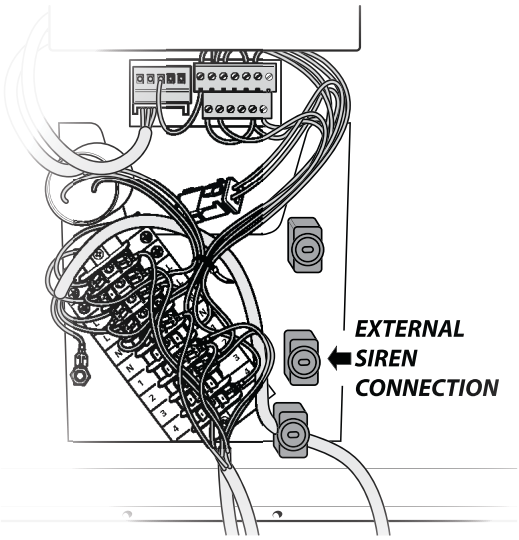
**ATTENTION**
**Appliances arranged for connection to the remote unit have an anchoring device for connecting the connection cable to the external unit.**




**ATTENTION**
**The type of relay to be used in installation and the installation system itself must comply with the current regulations.**

**230V mains voltage between terminals 1-N.**

**ATTENTION**
**Appliances arranged for connection to the remote alarm have an anchoring device for connecting the connection cable of the external siren.**




**ATTENTION**
**230V mains voltage between terminals 4-N.**

### B.3.4 Evacuating the lines and charging with refrigerant gas

#### B.3.4.1 Leakage test

- Wash the inlet and delivery pipes with pressurised dry nitrogen.
- Connect a nitrogen cylinder to the high and low pressure connectors, also making sure to install a pressure gauge (using a "T" union). Charge the high and low pressure lines with gas, until reaching a pressure of approx. 15 bar. Close the cylinder valve and, after at least 1 hour, check that the pressure has not dropped below the previous reading level.

#### B.3.4.2 Vacuum

- Empty the circuit manually by opening the valves on the unions.
- Connect the pipes to a vacuum pump (preferably a two-stage model with vacuum gauge and high and low pressure connectors). Reach a vacuum level equal to or lower than 70 mTorr (0.0931 mbar). On reaching this level, maintain it for about 15 minutes, then charge the unit as follows:

#### B.3.4.3 Charging with refrigerant

- Charge the high and low pressure lines with R134a for refrigerant gas and R404A for liquid refrigerant until the pressure between the cylinders and the circuit is balanced (the initial charge of fluid is approx. 20÷30% the total charge).
- Then shut off the high pressure line, start the compressor and charge with gas slowly until the bubbles in the fluid indicator disappear.

**ATTENTION**
**Charging with refrigerant must be done by a specialised technician.**

### B.3.5 Checks at first startup

Check on the refrigerant flow indicator if the charge is sufficient and, if necessary, complete it following the instructions in § 3.4.3.
Using a digital thermometer, make sure the temperature reading on the control panel matches that measured with the instrument inside the appliance.

**The Manufacturer declines any liability if the accident-prevention regulations are not respected.**

## C.1 Operation

### C.1.1 Digital temperature controller and control panel

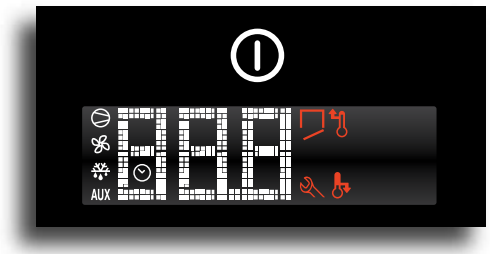
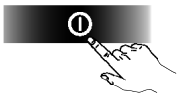



*Fig. 1*

*Fig. 2*

The digital temperature controller has a button for switching the appliance on and off *(fig.1)* and 6 buttons for control and programming the instrument *(see fig. 2)*.

#### C.1.1.1 Switching the appliance on



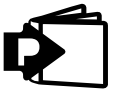
Connect the power cable to a power outlet. The instrument display does a Lamp Test and the message OFF appears. To activate and deactivate the appliance press the button for 5 seconds.
The display will show the message **ON** (for activation) or **OFF** (for deactivation). Even if the machine is deactivated with the On and Off button it still remains powered. This switch only disconnects the power to the loads connected to the instrument.

#### C.1.1.2 Control panel buttons (fig. 2)

**History button**
It memorises the temperature every 24 hours from switch-on for a total of 62 memorisations. It memorises high/low temperature alarms. Press the History button once to access the list of daily memorised values (t0 = current day; t1, t2, t3,etc.=previous memorisation days). With the buttons it is possible to view the temperatures of previous days.

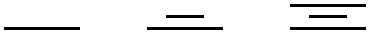
Press the button **Set** to display the memorised temperature of that period; press the button **P** to return to the list of stored values.

Press the button P for a few seconds to exit the **History** function. After the installation of the appliance, at least 24 hours must pass for the first temperature to be recorded. Holding down the button for a few seconds will reset the previous memorisations.



**Programs button**
It is used in the HISTORY function (see par. C.1.1.2).
Press the button **P** to also access the Technical Menu, which cannot be modified.

**Humidity button**
IT IS available in refrigerated models only and is used to set 3 different humidity levels. Depending on the humidity level the display will show images with 1, 2 or 3 lines that indicate: low, medium and high humidity.



*1 line (30%)* *2 lines (60%)* *3 lines (90%)*

Use the buttons to select the most suitable humidity level.

**Table of categories, compartment temperature and humidity setting**

| Categories | Temp.°C | Humidity |
|---|---|---|
| Fresh meat (beef, mutton, pork) | 4 | 90% |
| Poultry | -2 | 90% |
| Fruit & Veg | 6 | 90% |
| Eggs, butter, cheese, charcuterie | 6 | 90% |
| Fresh fish | 4 | 90% |
| Patisserie | 6 | 90% |
| Beverages | 8 | 60% |

To confirm the degree of humidity selected, press the button **Set** for 5 seconds.

**Set button**
If pressed for more than 1 second it displays and/or sets the **set point**. To increase or decrease the values, use the buttons
To confirm the new value, press the button **Set** again.

**Continuous cycle button**
Pressing the button for more than 5 seconds activates the "TC" Turbo Cooling cycle function (the message ccb=start appears), or activates the temperature reset function, skipping Defrost. During the continuous cycle the compressor always stays on; the low temperature alarm is deactivated; the message TC and the temperature value alternate on the display. The continuous cycle ends when:

- the button is pressed (the message cce=end appears);
- the lowest foreseen temperature is reached;
- the maximum duration is reached (time 1h);
- the instrument is switched off.

**"Up" button**
To increase the values.

**"Down" button**
To decrease the values.

**"Defrost" button**
Manual defrost activation.

**ATTENTION**
**Do not use mechanical devices or other means to speed up the defrost process, unless recommended by the manufacturer.**

**Be careful not to damage the circuit.**

The appliance is equipped with an automatic defrost device. A manual defrost cycle can be started by keeping the button pressed for at least 5 seconds (the display shows the message **DFb**).
In freezer models this function is signalled by lighting up of the defrost icon.

In refrigerated models signalling occurs by lighting up of the defrost icon and the fans LED.

Defrost is with forced ventilation only for refrigerated models.
Defrost can be stopped manually by pressing the relevant button for a few seconds: the display shows the message **dFE**. Defrost cannot be activated in the continuous cycle programming phase*.

*If the continuous cycle is activated and the button is pressed, defrost will be carried out at the end.

**Light button**
Available in models with glass door, its purpose is to switch on the inside light. In freezer models with fully insulated door, it changes the brightness of the compartment light.

### C.1.1.3 Digital temperature controller display

The digital temperature controller has a 3-digit electronic display and several signalling **icons** *(see fig.1)*

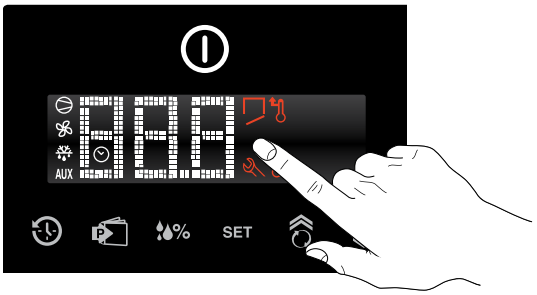
| | | |
|---|---|---|
| | lit up | indicates compressor activation |
| | lit up | indicates defrost function |
| | lit up | lit up indicates activation of compartment fans |
| | lit up | signals useful information regarding appliance operation (alarms) |
| *aux* | lit up | lit up indicates activation of auxiliary users (if available) |
| | lit up | indicates HISTORY function activated |

### C.1.2 Alarms and signalling

The message is signalled by lighting up of the icon. The alarm icons are also associated with the colour of the lamp that changes when there is an alarm (red). Signalling is also indicated by the corresponding code appearing on the display and activation of an audible alarm.

### C.1.2.1 Alarm silencing

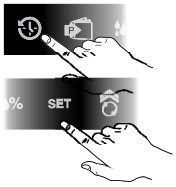
Alarms are silenced by pressing on the lit icon. The value shown on the display is also automatically reset.



### C.1.2.2 Alarm icons

**Compartment high temperature alarm**

When the compartment temperature exceeds the set maximum value the icon lights up and an audible alarm is activated. The alarm ceases when the temperature returns to the Set Point. A timer is also activated, which counts the time duration of the alarm until it is silenced.




Pressing the button **History** displays the code HI and then in sequence, pressing the button **Set**, the number of hours since the alarm occurred.

To deactivate the icon, press on it briefly.

**Compartment low temperature alarm**

The icon lights up and an audible alarm is activated when the compartment temperature exceeds the set minimum value. The alarm ceases when the temperature returns to the Set Point. A timer is also activated, which counts the time duration of the alarm until it is silenced. Pressing the button **History** displays the code LO and then in sequence, pressing the button **Set**, the number of days since the alarm occurred.

To deactivate the icon, press on it briefly.

**Door open alarm**

The icon lights up when the door is opened. After the max. door opening time the icon stays on fixed and the buzzer is activated. The alarm ceases when the door is closed.

**Service alarms**

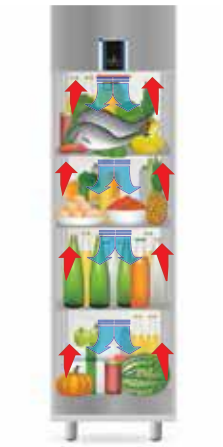
| Symbols | Meaning | Actions |
|---|---|---|
| **E0 "rE"** | compartment probe fault | **Call After-Sales Service** |
| **E1** | room probe fault | |
| **E2** | condenser probe fault | |
| **CLn (*)** | the condenser needs cleaning | |
| **"Ser"** | condenser fan failure | |
| **CN** | communication between temperature controller and compartment lamp interrupted | |

(*) If the message "CLn" appears, first make sure there are no obstructions on top of the machine; otherwise, they must be immediately removed.
Then, after the signalling is reset, check if the condenser is very dirty and clean it if necessary (operation **not** requiring After-Sales Service).

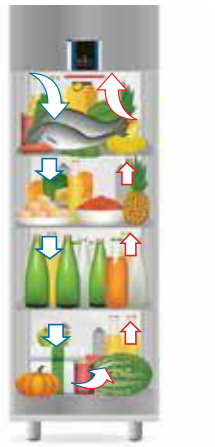
**NOTE**: The message "CLn" is factory-set in maximum room temperature operating conditions (43°C) and considering the condenser completely obstructed.

### C.1.3 Loading the product

Distribute the product evenly inside the compartment (away from the door and back) to allow good air circulation:



600 mm model



900 mm model

Regarding the max. load for each shelf, respect that given in the table below:

| Max. shelf load | |
|---|---|
| Prostore vertical refrigerators with digital control - **600 mm** | **40 kg** |
| Prostore vertical refrigerators with digital control - **900 mm** | **60 kg** |

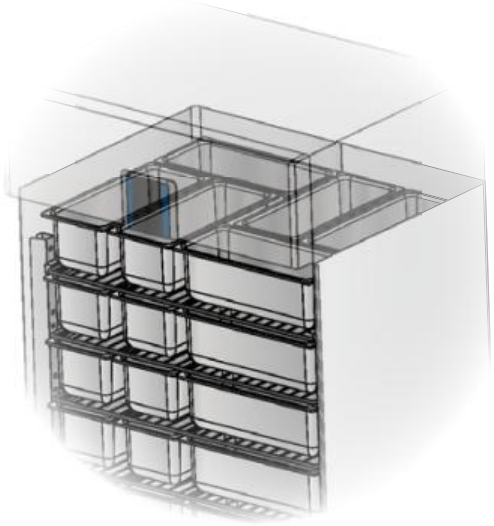
In case of excessive product loading, the temperature remains uniform thanks to the removable rear supports which act as an air conveyor.

Cover or wrap food before placing it in the refrigerator and avoid putting hot foods or steaming liquids inside.

**ATTENTION**
**Do not load products on the compartment bottom without the bottom rack (refer to par. D.1.1.3 Compartment cleaning).**

ENGLISH

Regarding "ice-cream preserver" models, load the trays as shown in the diagram below:



To allow good air circulation and correct uniformity in the compartment, make sure the trays (or other) do not to obstruct the air inlet and delivery duct.

Regarding the max. load for each shelf in "ice-cream preserver" models, respect that given in the table below:

| Max. shelf load | |
|---|---|
| Prostore vertical refrigerators<br>ice-cream preservers | **40 kg** |

Do not leave the door open any longer than necessary when loading or removing food or trays.

The appliance is supplied complete with the lock kit and keys. It is advisable to keep the keys in a place only accessible to authorised personnel. To prevent unauthorised personnel from using the appliance, it is advisable to always close it with the key.

**ATTENTION**
**Do not use electrical devices inside the compartments for storing frozen food, unless they are recommended by the manufacturer.**

## C.2 General safety rules

### C.2.1 Introduction

The machines are provided with electric and/or mechanical safety devices for protecting workers and the machine itself. Therefore the user must not remove or tamper with such devices.
The Manufacturer declines any liability for damage due to tampering or their non-use.

### C.2.2 Protection devices installed on the machine

#### C.2.2.1 Guards

The guards on the machine are:

- fixed guards (e.g. casings, covers, side panels, etc.), fixed to the machine and/or frame with screws or quick-release connectors that can only be removed or opened with tools;
- interlocked movable guards (door) for access inside the machine;
- machine electrical equipment access doors, made from hinged panels openable with tools. The door must not be opened when the machine is connected to the power supply.

**ATTENTION**
**Several illustrations in the manual show the machine, or parts of it, without guards or with guards removed. This is purely for explanatory purposes. Do not use the machine without the guards or with the protection devices deactivated.**

### C.2.3 Safety signs to be placed on the machine or near its area

| Prohibition | Meaning |
|---|---|
| | do not remove the safety devices |
| | do not use water to extinguish fires (placed on electrical parts) |

| Danger | Meaning |
|---|---|
| | danger of burns |
| | danger of electrocution (shown on electrical parts with indication of voltage) |

**ATTENTION**
**Do not remove, tamper with or make illegible the safety, danger and instruction signs and labels on the machine.**

#### C.2.4 End of use

When the appliance is no longer to be used, make it unusable by removing the mains power supply wiring.

#### C.2.5 Instructions for use and maintenance

Risks mainly of a mechanical, thermal and electrical nature exist in the machine.
Where possible the risks have been neutralised:

- directly, by means of adequate design solutions,
- indirectly by using guards, protection and safety devices.

Any anomalous situations are signalled on the control panel display.
During maintenance several risks remain, as these could not be eliminated, and must be neutralised by adopting specific measures and precautions.
Do not carry out any checking, cleaning, repair or maintenance operations on moving parts.
Workers must be informed of this prohibition by means of clearly visible signs.
To guarantee machine efficiency and correct operation, periodical maintenance must be carried out according to the instructions given in this manual.
In particular, make sure to periodically check correct operation of all the safety devices and the insulation of electrical cables, which must be replaced if damaged.

**ATTENTION**
**Extraordinary machine maintenance operations must only be carried out by specialised technicians provided with all the appropriate personal protection equipment (safety shoes, gloves, glasses, overalls, etc.), tools, utensils and ancillary means.**

**Never operate the machine, removing, modifying or tampering with the guards, protection or safety devices.**

**Before carrying out any operation on the machine, always consult the manual, which gives the correct procedures and contains important information on safety.**

### C.2.6 Reasonably foreseeable improper use

Improper use is any use different from that specified in this manual. During machine operation, other types of work or activities deemed improper and that in general can involve risks for the safety of operators and damage to the appliance are not allowed.
Reasonably foreseeable improper use includes:

- lack of machine maintenance, cleaning and periodical checks;
- structural changes or modifications to the operating logic;
- tampering with the guards or safety devices;
- failure to use personal protection equipment by operators, specialised technicians and maintenance personnel;
- failure to use suitable accessories (e.g. use of unsuitable equipment or ladders);
- keeping combustible or flammable materials, or in any case materials not compatible with or pertinent to the work, near the machine;
- wrong machine installation;
- placing in the machine any objects or things not compatible with refrigeration, freezing or preservation, or that can damage the machine, cause injury or pollute the environment;
- climbing on the machine;
- non-compliance with the requirements for correct machine use;
- other actions that give rise to risks not eliminable by the Manufacturer.

**ATTENTION**
**The previously described actions are prohibited!**

### C.2.7 Residual risks

The machine has several risks that were not completely eliminated from a design standpoint or with the installation of adequate protection devices.
Nevertheless, through this manual the Manufacturer has taken steps to inform operators of such risks, carefully indicating the personal protection equipment to be used by them.
Sufficient spaces are provided for during the machine installation stages in order to limit these risks.
To preserve these conditions, the areas around the machine must always be:

- kept free of obstacles (e.g. ladders, tools, containers, boxes, etc.);
- clean and dry;
- well lit.

For the Customer's complete information, the residual risks remaining on the machine are indicated below: such actions are deemed improper and therefore strictly forbidden.

| Residual risk | Description of hazardous situation |
|---|---|
| Slipping or falling | The operator can slip due to water or dirt on the floor |
| Burns/abrasions (e.g. heating elements, cold pan, cooling circuit plates and pipes) | The operator deliberately or unintentionally touches some components inside the machine without using protective gloves |
| Electrocution | Contact with live parts during maintenance operations carried out with the electrical panel powered |
| Falling from above | The operator intervenes on the machine using unsuitable systems to access the upper part (e.g. rung ladders, or climbs on it) |
| Crushing or injury | The specialised technician may not correctly fix the control panel when accessing the technical compartment. The panel could close suddenly. |
| Tipping of loads | When handling the machine or the packing containing it, using unsuitable lifting systems or accessories or with the load unbalanced |
| Chemical (refrigerant gas) | Inhalation of refrigerant gas. Therefore always refer to the appliance labels |

## C.3 Normal machine use

### C.3.1 Characteristics of personnel trained for normal machine use

The Customer must make sure the personnel for normal machine use are adequately trained and skilled in their duties, as well as ensuring their own safety and that of other persons.
The Customer must make sure his personnel have understood the instructions received and in particular those regarding work hygiene and safety in use of the machine.

### C.3.2 Characteristics of personnel enabled to operate on the machine

The Customer is responsible for ensuring that persons assigned to the various duties:

- read and understand the manual;
- receive adequate training and instruction for their duties in order to perform them safely;
- receive specific training for correct machine use.

### C.3.3 Operator qualified for normal machine use

He must have at least:

- knowledge of the technology and specific experience in operating the machine;
- adequate general basic education and technical knowledge for reading and understanding the contents of the manual;
- including correct interpretation of the drawings, signs and pictograms;
- sufficient technical knowledge for safely performing his duties as specified in the manual;
- knowledge of the regulations on work hygiene and safety.

In case of a significant anomaly (e.g. short circuits, wires coming out of the terminal block, motor breakdowns, worn electrical cable sheathing, etc.) the operator for normal machine use must:

- immediately deactivate the machine.

## D.1 Machine cleaning and maintenance

**ATTENTION**
**Before carrying out any cleaning or maintenance, disconnect the appliance from the power supply and carefully unplug it.**

**During maintenance, the cable and plug must be kept in a visible position by the operator carrying out the work.**

**Do not touch the appliance with wet hands or feet or when barefoot.**

**ATTENTION**
**DO NOT remove the safety guards.**

**Use suitable personal protection equipment (protective gloves).**

**Use a ladder with suitable protection for work on appliances with high accessibility.**

### D.1.1 Routine maintenance

**ATTENTION**
**Disconnect the power supply before cleaning the appliance.**

#### D.1.1.1 Precautions for maintenance

Routine maintenance operations can be carried out by non-specialised personnel, carefully following the instructions given below. **The manufacturer declines any liability for operations carried out on the machine without following these instructions**.

#### D.1.1.2 Cleaning the cabinet and accessories

Before using the appliance, clean all the internal parts and accessories with lukewarm water and neutral soap or products that are over 90% biodegradable (in order to reduce the emission of pollutants into the environment), then rinse and dry thoroughly. Do not use solvent-based detergents (e.g. trichloro-ethylene) or abrasive powders for cleaning.
It is advisable to go over the stainless steel surfaces with a rag moistened with paraffin oil in order to create a protective film.
Check the power cable regularly and replace it in case of signs of wear.
Have the appliance checked periodically (at least once a year).

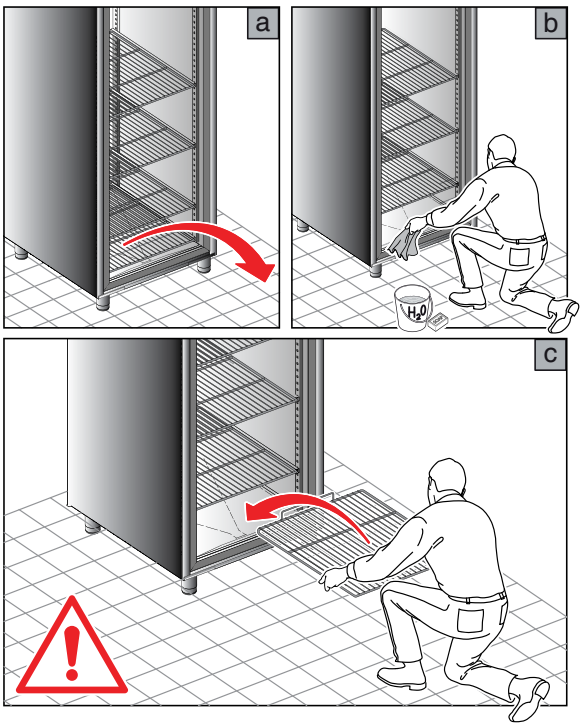
**ATTENTION**
**Do not clean the machine with jets of water.**

**ATTENTION**
**Do not use steel wool or similar material to clean the stainless steel surfaces. Do not use detergents containing chlorine, solvent-based detergents (e.g. trichloro-ethylene) or abrasive powders.**

#### D.1.1.3 Compartment cleaning

The racks can be removed in order to thoroughly clean the compartment, therefore remove them before cleaning. For this, use products that are over 90% biodegradable (do not use solvents or abrasive powders), then rinse and dry thoroughly.

**Pay special attention when cleaning the front control panel: make sure water sprays do not go beyond the panel.**
ATTENTION:
There is an extra rack on the bottom of the compartment. When cleaning, if this rack is temporarily removed, remember to refit it in its original place, as shown in the figure (detail "c"), in order to ensure proper operation of the appliance:




#### D.1.1.4 Precautions in case of long idle periods

If the appliance is not going to be used for some time, take the following precautions:

- remove the plug from the power socket;
- remove all food from the compartment and clean the inside and accessories;
- clean the cabinet, going over all the stainless steel surfaces vigorously with a rag moistened with paraffin oil to create a protective film;
- leave the door ajar so that air can circulate inside, preventing the formation of unpleasant odours.
- periodically air the premises.

**ATTENTION**
**Work on the electrical equipment must only be carried out by a specialised electrician or the After-Sales Service.**

**ATTENTION**
**Maintenance, checking and overhaul operations must only be carried out by a specialised technician or the After-Sales Service, provided with suitable personal protection equipment (safety shoes and gloves), tools and ancillary means.**

**Put the machine in safe conditions before starting any maintenance operation.**

**Respect the requirements for the various routine and extraordinary maintenance operations. Non-compliance with the instructions can create risks for personnel.**

After carrying out maintenance make sure the machine is able to work safely and, in particular, that the protection and safety devices are efficient.

**D.1.2 Extraordinary maintenance**

**ATTENTION**
**WEAR PROTECTIVE GLOVES AND A MASK WHEN CARRYING OUT ANY EXTRAORDINARY MAINTENANCE OPERATIONS.**

**NOTE**
**Extraordinary maintenance must be carried out by specialised personnel, who can ask the manufacturer to supply a servicing manual.**

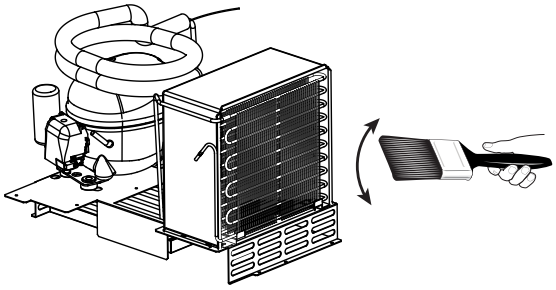
**D.1.2.1 Periodical condenser cleaning**

Periodical cleaning of the equipment depends on the frequency of it use.

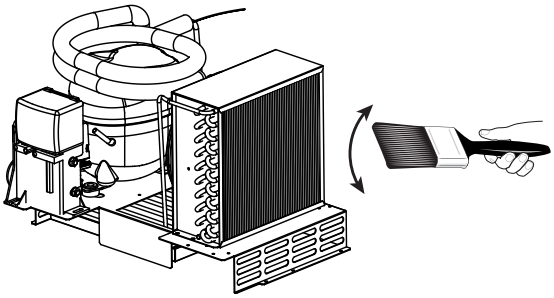
**ATTENTION**
**Pay attention to the electrical cables located near the condenser!**

Make sure not to obstruct the air passage on models with wire and tube condenser (located in the roof of the machine). This type of condenser does not need cleaning and does not lose efficiency over time. To ensure optimum appliance operation, the refrigerating unit condenser must be cleaned at least once every 3 months.
**Note**: It is advisable to use a brush or vacuum cleaner to remove the dirt accumulated on the condenser. Do not use sharp objects, which could damage the condenser.

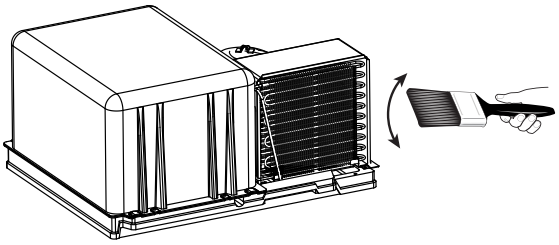
- **Condenser 600 mm refrigerated model:**



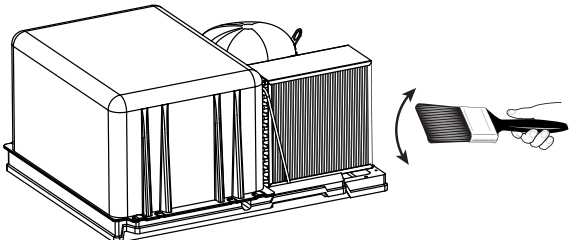
- **Condenser 600 mm freezer model:**



- **Condenser 900 mm refrigerated model:**



- **Condenser 900 mm freezer model:**



#### D.1.2.2 Replacing the power cable

To replace the power cable, proceed as follows:

- disconnect the power supply;
- undo the control panel fixing screws;
- lift the control panel and make sure it is locked (it is advisable to fix it with adhesive tape);
- remove the electrical box plastic cover;
- replace the power cable;
- refit the electrical box plastic cover and lower the control panel;
- retighten the control panel fixing screws;
- reconnect the power supply.

#### D.1.2.3 Quick troubleshooting guide

In some cases, faults can be eliminated easily and quickly by following a brief troubleshooting guide:

**A.** *The appliance does not switch on:*

- make sure the plug is properly inserted in power socket.
- make sure the socket is powered.

**B.** *The inside temperature is too high:*

- check the thermostat setting;
- make sure there is no heat source near the appliance;
- make sure the door closes properly.

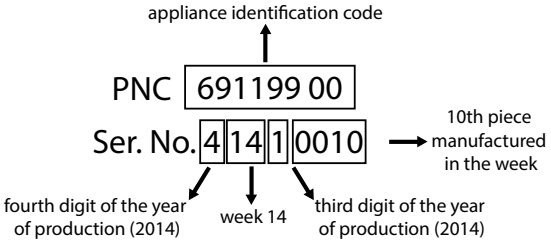
**C.** *The appliance is too noisy:*

- make sure the appliance is properly levelled. An unbalanced position can set off vibrations.
- make sure the appliance is not touching other equipment or parts which could reverberate.

If the fault persists after carrying out the above checks, contact the After-Sales Service, remembering to specify:

- the type of fault;
- the appliance PNC (production number code);
- the Ser. No. (appliance serial number).

**Note: The code and serial number are essential for identifying the type of appliance and date of manufacture:**


appliance identification code
PNC 691199 00
Ser. No. 4 14 1 0010
10th piece manufactured in the week
fourth digit of the year of production (2014)
week 14
third digit of the year of production (2014)

### D.1.3 Maintenance intervals

The inspection and maintenance intervals depend on the actual machine operating conditions and ambient conditions (presence of dust, damp, etc.), therefore precise time intervals cannot be given. In any case, careful and periodical machine maintenance is advisable in order to minimise service interruptions.

**It is advisable to stipulate a preventive and scheduled maintenance contract with the After-Sales Service.**

#### D.1.3.1 Maintenance frequency

To ensure constant machine efficiency, it is advisable to carry out the checks with the frequency given in the following table:

| Maintenance, inspections, checks and cleaning | Frequency |
|---|---|
| **Routine cleaning**<br>general cleaning of machine and surrounding area | **daily** |
| **Mechanical protection devices**<br>check their condition and for any deformation, loosening or removed parts | **monthly** |
| **Control**<br>check the mechanical part, for cracks or deformation, tightening of screws: check the readability and condition of words, stickers and symbols and restore if necessary | **yearly** |
| **Machine structure**<br>tightening of main bolts (screws, fixing systems, etc.) of machine | **yearly** |
| **Safety signs**<br>check the readability and condition of safety signs | **yearly** |
| **Electrical control panel**<br>check the electrical components installed inside the electrical control panel. Check the wiring between the electrical panel and machine parts. | **yearly** |
| **Electrical connection cable and plug**<br>check the connection cable (replace if necessary) and plug | **yearly** |
| **General machine overhaul**<br>check all components, electrical equipment, corrosion, pipes… | **every 10 years*** |

(*) the machine is designed and built for a duration of about 10 years. After this period of time (from commissioning) the machine must undergo a general inspection and overhaul. Some examples of checks to be carried out are given below.

- check for any oxidised electrical components or parts; if necessary, replace them and restore the initial conditions;
- check the structure and welded joints in particular;
- check and replace bolts and/or screws, also checking for any loose components;
- check the electrical and electronic system;
- check the functionality of safety devices;
- check the general condition of protection devices and guards.

**ATTENTION**
**Maintenance, checking and overhaul operations must only be carried out by a specialised technician or the After-Sales Service, provided with adequate personal protection equipment (safety shoes and gloves), tools and ancillary means.**

**ATTENTION**
**Work on the electrical equipment must only be carried out by a specialised electrician or the After-Sales Service.**

### D.1.4 Disassembly

If the appliance has to be disassembled and then reassembled, make sure the various parts are assembled in the correct order (if necessary mark them during disassembly).

Before disassembling the machine, make sure to carefully check its physical condition, and in particular any parts of the structure that can give or break. Before starting disassembly:

- remove all the pieces (if present) in the machine;
- disconnect the power supply;
- enclose the work area;
- place a sign on the Main Electrical Panel indicating that the machine is undergoing maintenance and not to carry out manoeuvres;
- carry out the disassembly operations.

**ATTENTION**
**All scrapping operations must occur with the machine stopped and cold and the electrical power supply disconnected.**

**Work on the electrical equipment must only be carried out by a qualified electrician, with the power supply disconnected.**

**ATTENTION**
**To carry out these operations, appropriate PPE must be used.**

**During disassembly and handling of the various parts, the minimum height from the floor must be maintained.**

#### D.1.5 Decommissioning

If the machine cannot be repaired, carry out the decommissioning operations, signalling the failure with a suitable sign, and request assistance of the manufacturer's after-sales service.

## D.2 Machine disposal

**ATTENTION**
**Dismantling operations must be carried out by qualified personnel.**

**ATTENTION**
**Work on the electrical equipment must only be carried out by a qualified electrician, with the power supply disconnected.**

#### D.2.1 Waste storage

At the end of the product's life-cycle, make sure it is not dispersed in the environment. The doors must be removed before scrapping the appliance.
SPECIAL waste materials can be stored temporarily while awaiting treatment for disposal and/or permanent storage.
In any case, the current environmental protection laws in the user's country must be observed.

#### D.2.2 Procedure regarding appliance dismantling macro operations

Before disposing of the machine, make sure to carefully check its physical condition, and in particular any parts of the structure that can give or break during scrapping.
The machine's parts must be disposed of in a differentiated way, according to their different characteristics (e.g. metals, oils, greases, plastic, rubber, etc.).
Different regulations are in force in the various countries, therefore comply with the provisions of the laws and competent bodies in the country where scrapping takes place.
In general, the appliance must be taken to a specialised collection/scrapping centre.
Dismantle the appliance, grouping the components according to their chemical characteristics, remembering that the compressor contains lubricant oil and refrigerant fluid which can be recycled, and that the refrigerator components are special waste assimilable with urban waste.

The symbol on the product indicates that this product should not be treated as domestic waste, but must be correctly disposed of in order to prevent any negative consequences for the environment and human health. For further information on the recycling of this product, contact the local dealer or agent, the after-sales service or the local body responsible for waste disposal.

**ATTENTION**
**Make the appliance unusable by removing the power cable and any compartment closing devices, to prevent the possibility of someone becoming trapped inside.**

**NOTE**
**When scrapping the machine, the "CE" marking, this manual and other documents concerning the appliance must be destroyed.**

## D.3 Enclosed documents

- Set of test and inspection documents
- Wiring diagram
- Installation diagram
- "CE" Declaration of Conformity